
PRODUCT UPDATE

Firmware v1.6.5 incremental release Terra AC Wallbox

Dear customer,

The purpose of this communication is to inform you about the incremental release of a new firmware version for the ABB Terra AC Wallbox (CE non-display / display (MID certified)). This release improves the performance and reliability of the chargers and provides enhancements to the embedded firmware. This document provides an overview of main improvements and issues solved. The new firmware package will be made available in the ChargerSync portal, TerraConfig app and ChargerSync app. Customers can moreover obtain the firmware packages by request. We thank you for your feedback and we continuously invite you to provide us with ideas and suggestions to improve our products.



This release is an incremental release and has known issues as mentioned in the section Known Issues. These Known Issues are considered as non-critical for chargepoint operation. While releasing this firmware version to the market, our team will continue to gather feedback and improve the 1.6 firmware. We will, moreover, continue to perform and finalize our full function tests for both CE non-display and display (MID certified) variants.

Best regards,
On behalf of the ABB E-mobility team,



J.L.R. Visser
Global product manager Terra AC EMEA

Applicable products

This release is applicable to:

- Terra AC Wallbox CE non-display / display (MID certified)

Changes between firmware version 1.5.2 and 1.6.5

The table below describes the changes between the previous firmware version and the new release. The section Known Issues shows the issues that are unsolved in this incremental release firmware version.

Features	
	Load management - update <ul style="list-style-type: none"> - Improved the algorithm for local dynamic load management for single charger by introducing a phase-based load balancing algorithm - Introduced the option to take into account the maximum phase imbalance of the grid in the dynamic load management algorithm for single charger - Introduced fallback limit variable that can be described as the value (in Ampere) to which the charger will limit its power output to at the moment the connection the smart meter is lost.
	UK Smart Charging Legislation Compliance <ul style="list-style-type: none"> - Support off-peak charging - Support Randomized Delay - Customized OCPP key - RandomDelayCancel
	IT network on MID designs
	Mistake proof validation check at charger level during firmware update process
	Increase WiFi password length (to 32 characters)
	Improved daisy chain
	Show Charger IMEI
	PE detection as default disable in the charger firmware
	Support OCPP URL length of 200 characters
	Charger by default process the scanning of ABB and external RFID card
	MID certificate version number update
Modbus	
	Lock/Unlock cable on charger side
	Improved 4100H – Set Charging Current Limit use case <p>Set Charging Current Limit register could be set anytime instead of during transaction</p>
	EV1 meter support <p>EV1 meter also supported by reading correct Active power total register. Different ABB meters are identified internally by charger and information transferred according to specific profile</p>
	New Modbus register to define communication timeout while in secondary mode <p>Provides a configurable approach to support interoperability</p>

OCPP

Smart Charging profile update

- GetCompositeSchedule
 - Support complex charging schedule by increased stack and periods for different charger variants via:
 - ChargeProfileMaxStackLevel (16 for display models, 3 for non-display)
 - ChargingScheduleMaxPeriods (25 for all variants)
 - report SupportedFeatureProfiles key to include SmartCharging profile while using GetConfiguration
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GetDiagnostics

In Firmware Management profile, GetDiagnostics and DiagnosticsStatusNotification messages also supported.

Moving forward custom message diagnostic log will be phased out.

New key support:

MaxEnergyOnInvalidId

StopTransactionOnInvalidId

ResetRetries

TransactionMessageAttempts

TransactionMessageRetryInterval

Support UTC time zone offset format

Charger supports processing currentTime in the format of UTC±HH:MM as well send by Central System/OCPP Server.

This zone offset could be used for the purpose of identifying/displaying the time in local time zone. Possible to extract from BootNotification and Heartbeat messages.

OCPP keys to support local time zone

Keys supports for country specific local time adjustment and display purposes.

MeterValuesSampledData according to Measurand enumeration

Improvement on UpdateFirmware from external OCPP server

Charger supports to use ABB URL 'location' to perform UpdateFirmware from external OCPP server.

Support mobile app operation by OCPP DataTransfer message

Allow OfflineTxForUnknownId

OCPP key to associate RFID tag with Free vending

Align with DC charger approach, New FreevendIdTag key to associate with FreevendEnabled for auto charge behavior

AuthorizationKey support

chargePointVendor is updated as ABB

Bug fixes

Fix StatusNotification issue for connectorId=0

Corrected the error for connectorId=0 handling which was unclear

The Total Power meter value of the charger is not being sent, but only the single phases

Report meterStop value while recovered from power loss

Clean up alias related handling while using external OCPP server

Current offered not set correctly while using RemoteStartTransaction with TxDefaultProfile

Fix the issue of internal set limit logic.

In the future, charger will enforce to use "ChargingProfilePurpose MUST be set to TxProfile" for RemoteStartTransaction as per OCPP specification.

Incorrect statusNotification "occupied" when the user plugs his car

Align and clean up on the backend to use state according to protocol version used.

Charger into reboot mode when offline mode and enabled dry contact

Certain cases of Modbus settings were set back to default on upgrade to FW v1.6.3

Certain cases of OCPP configuration settings were set back to default on upgrade to FW v1.6.3

Issues were reported that Firmware upgrade/downgrade process could not be executed while charger was in charging mode

Charger was not able to reset if OCPP ResetRetries were less than 2

Backwards compatibility issues with DLM for single charger for Fallback Limit and time zone

GetConfiguration command showing limitations in deployment. Addressed by defining get configuration command to show all non-customized keys

Update in response logic of RemoteStartTransaction

Update on dynamic load management for system stability by addressing bugs on meter communication and setting the implementation as connecting a single phase meter to a single phase charger and a three phase meter to a three phase charger

Increased the bin file acceptance size of the CE version chargepoint (CE non-display bug fix only)

Known Issues

Modbus RTU communication bus error when "No Modbus" selected for a charger in the bus

Charger should be able to support a twisted startPeriod sequence in the scheduled periods of a smart charging profile

Charger should reject a chargingProfile in which the first startPeriod is not 0

Charger ignores the transactionId in a TxProfile, since there is only one session active in our system

Fallback time and Fallback limit of dynamic load management for single charger should be related to loss of energy meter information

Load management settings in Terraconfig application should not influence the historic settings set in ChargerSync application

Alignment of the FreevendEnabled and FreevendIdTag OCPP commands to ABB E-mobility DC charger implementation (with lower case 'v')

Domain length of OCPP URL can only be 47 characters long, but should be extended to 60 characters